of successfully employing one of the triumphant expedients of modern surgery, to save an unfortunate fellow-creature from the jaws of the grave, to restore a husband to his despairing wife, and a father to his afflicted children. My gratification will be increased, should the detail of this case, by adding something to the book of experience, aid in promoting similar results.

Maracaybo, June 23d, 1828.

Art. V. *On the Topography and Diseases of Western Pennsylvania.* By L. Callaghan, Member of the Faculty of Medicine, and Licentiate of the Faculty of Physicians and Surgeons of Glasgow.

WESTERN Pennsylvania stretches from 39° 40′ to 42° 20′ north latitude, and from 78° to 81° west longitude. It is bounded by the Alleghany mountains on the east, by the state of Ohio on the west, by that of Virginia on the south, and New York on the north, having that great inland sea, Lake Erie, on its north-western boundary. This portion of Pennsylvania may in geographical language be called a table land; low water mark at the city of Pittsburg is one hundred and fifty-two feet above Lake Erie, seven hundred and twenty-seven feet above the Hudson at Albany, and seven hundred and fifty-six feet above the Atlantic ocean at Cape May; the apex of the highest ranges of hills are about twelve hundred feet above tide water level in the Chesapeake.

The entire surface of the country is made up of a succession of hills with intervening valleys, the aspect of descent lying towards the south-west. The land abounds in a rich bituminous coal and limestone; the luxuriance of the timber is the best evidence of the natural fertility of the soil; the vallies are equally remote from marsh, and the hills from sterility. The country is well watered; the Alleghany, Conemaugh, Kiskeminitas, and Monongahela are its principal rivers; the Alleghany and Monongahela uniting at the city of Pittsburg to form the majestic Ohio. In the investigation of the atmosperical temperature of western Pennsylvania, perhaps the climatic thermometer of Volney is the best standard that can be used, from which four general cases will determine the difference of climate on any two given places on our globe. 1. Difference of latitude. 2. Difference of elevation. 3. Exposure to particular winds. 4. Proximity to, or remoteness from, large bodies of water.

Judging from latitude alone, we could neither account for the tropical heat of summer, nor for the intensity of the cold in winter, experienced in western Pennsylvania; nor much less could we account for the magnitude and suddenness of the changes, situated as we are under similar parallels of latitude with the city of Madrid in Spain, the islands of Minorca and Sardinia in the Mediterranean, the cities of Rome and Naples in Italy, and that of Constantinople in Turkey. Hence we must look, in the investigation of our climate, to our elevated situation; our exposure to the north, north-west, and westerly winds, to our being protected by mountains more than two thousand feet high, from the east; and south-east to our being remote from the warm air of the gulf stream, or the general equalizing effects of the waters of the ocean on the atmosphere; to which may be added the large portion of our land which is yet under forest. From this combination of causes the climate may be accounted for in the most satisfactory manner.

It is to be regretted that we are not as yet in possession of any regular series of thermometrical observations from which the alternations of temperature might be exactly known. This is a subject well worthy the attention of the practitioner of medicine, and comes immediately within his province, as without an accurate investigation of the effects of climate on the human body it is impossible to arrive at any thing like scientific conclusions with regard to disease. However, we may appeal to the experience of every person of observation, resident in western Pennsylvania, for the high temperature of our summer heat and the piercing cold of winter, with the suddenness and magnitude of the changes throughout the year. The past winter indeed, forms an exception in point of mildness scarcely to be equalled within the remembrance of the oldest inhabitants. We have had comparatively speaking but little frost, and scarcely any snow, but we have had the most complete succession of continued rains from October to March.

During the months of July and August it is not uncommon for the thermometer of Fahrenheit to rise to upwards of 96° in the shade. This high temperature however is not durable for any number of days or even hours of the same day, and can only exist during a southerly wind. The wind veering about to the north or particularly the north-west, will lower the thermometer 10, 20, 30, or 40° in the course of a few hours. During the 27th, 28th, and 29th of January, 1821, the thermometer stood at from 13 to 14° below zero of Fahrenheit's thermometer; this may be taken as a specimen of our most intense cold, but in almost every winter the mercury sinks to or below zero; this can only last during the continuance of a northerly or north-westerly wind, particularly the latter; on a change of wind to the southward, the temperature will rise 10, 20, or 30° in the course of twenty-four hours. In the latter end of March, 1828, the thermometer rose for a few days above 60° of Fahrenheit; in the beginning of April it was down below the freezing point. Such is our vicissitude of climate that it is impossible to calculate on any invariable range of temperature for any given time during any season of the year. In winter the north-westerly winds bring us the most intense degrees of cold; this may be accounted for, from the immense regions covered for the greater part of the year with ice or snow lying north-west of us; those immense inland seas, Erie, Huron, Michigan and Superior, which are frozen up for several months in the year, and to our being exposed to the full and unmitigated sweep of this wind, blowing over those regions, without the intervention of mountain or the equalizing effect of the waters of the ocean. On the contrary the south wind coming to us from the Gulf of Mexico and the valley of the Mississippi, blowing over land for nearly two thousand miles, brings us a very increased degree of heat, and accounts satisfactorily for the high temperature of our summers.

The prevailing diseases in summer and autumn are affections of the brain, stomach, and bowels, particularly the latter. In winter and spring we have diseases of the chest and lungs; the latter is increasing among the sedentary population of our towns with fearful strides. As we are happily free from marsh miasmata, we are strangers to those forms of intermittents which are endemial east, west, north, and south of us. Our fevers are generally of the continued type, accompanied with the inflammatory diathesis, the synochus and synocha of CULLEN, and characterized by deranged action of the brain and bowels.

We seldom meet with any of the low forms of typhus mitior, and are strangers for the most part to typhus gravior. Hence we have no contagious fevers.

In summer and autumn our agricultural population are not unfrequently visited with dysentery. This is not so common among the inhabitants of the towns; which may be accounted for from the exposure of the agriculturists to the increased heat of summer and autumn. It is in most cases either during harvest, or immediately after it, that this disease breaks forth.

During harvest the farmer is exposed to the most violent and laborious exercise under a burning sun, which cannot fail to induce a high degree of excitement in the system. The body is bathed with perspiration, the clothes are saturated with it. The thin linen pantaloons, the shirt, &c. the usual summer dress of the farmer, becomes as wet in the case of many persons as if they had been drawn through water. If he stops to rest for a little, that part of his dress not in immediate contact with his body becomes cooled down so rapidly, that if it is allowed to touch the skin it induces a sensation which can only be compared to the application of ice to the body under other circumstances. Here is a fertile source of disease. His thirst is intolerable; he must drink large quantities of fluid; nature calls for a reduction of the febrile excitement of the system; the increased perspiration must be supplied; the usual drink is ardent spirits with water. To enable him to undergo his increased labour, his food is rendered more luxurious, and for the most part more indigestible. He swallows large and frequently repeated quantities of solid animal food. His night of rest is short, and his day of labour long. He is frequently found out in his light dress, with the system yet hot with the excitement of the day, under the dews of the evening. He is out in the morning with the rising of the sun, while the fields are still wet with the dews of the previous night. Here are other fertile sources of disease. The fever which is attendant on this disease is of a highly inflammatory type; the bowels and peritoneum partake most severely of the diseased action. It is not usually fatal under any well regulated mode of treatment. It is not contagious, although its spreading over entire sections of adjoining country, induces a belief among the people that it is so. But this arises from all having been exposed less or more, to the original exciting causes of the affection, and not from the powers of contagion.

Cholera infantum is a disease frequent in the towns during the summer months, and more especially in confined and badly ventilated apartments. In these places its fatality is considerable.

It is usual in professional intercourse to hear a great deal about bilious diseases; we have bilious fevers, bilious colics, bilious head-aches, and even bilious pleurisies, without end. Does a patient present himself with a furred tongue, he is bilious; has he constipation of the bowels, he is bilious; has he impaired digestion, he is bilious; and so on, until at length biliary derangement has become, in the vocabulary of these gentlemen, the primum mobile in most cases of disease. Were this simply confined to an error in nosological discrimination, it would be comparatively harmless, but it leads to the most mischievous errors in practice. That we have in reality no such biliary derangement, it is only necessary to appeal to our climate. It is physically impossible that it should exist under our variable atmosphere and in our elevated situation. It is only in marshy countries and under a more southern sun, that general hepatic derangement entwines itself to any extent with the prevailing diseases, as in the more southern and low-lying sections of the United States or the peninsula of India.

Here we should have post mortem examinations to appeal to, but our medical industry presents us only with meagre data in this respect. Had this method of investigation been resorted to, it is matter of impossibility that we could long have laboured under this biliary delusion. The prepossessions of the people may be pleaded in extenuation, but this affords only a slender cover; the minds of the people here, as well as in the sea-board cities, might and would be entirely under the guidance of their medical attendants in this respect, were they to set the importance of it in every case plainly before them.

We shall now consider the propriety of using mercury in these diseases.

From the well-known effects of mercury on the human constitution,* it evidently behooves the judicious practitioner to weigh well the propriety of having recourse to so powerful an agent. Previous to its administration, it should be ascertained that it is not only applicable, but absolutely necessary for the particular case of disease; nothing short of this can justify its use in a single instance. That there are cases of disease in Western Pennsylvania demanding the exhibition of this mineral, I am well aware from experience, but that it is necessary, or even applicable to the general mass of summer or autumnal complaints incident to the country, and as modified by the climate, is neither warranted by facts or just induction; as a proof of this, it is only necessary to refer to a list of those diseases with their remote and proximate effects on the constitution. And first, of cholera infantum, (the cholera of adults is but of rare occurrence,) dissection, it is true, proves an accumulation of bile in the stomach and duodenum, relaxation and distention of the biliary ducts; but this is only the effect, not the cause, of the disease. Vomiting and purging constitutes the characteristic symptoms of the complaint, from which we may infer a high degree of irritability of the stomach and bowels, occasioned for the most part by increased atmospherical temperature. Can the accumulation of bile in the stomach or duodenum, or the increased irritability of the stomach and bowels indicate the use of mercury? Most assuredly not. The use of this mineral would not only increase the accumulation of bile, but the irritability also. Hence, instead of being beneficial, it would accumulate all the evil consequences of the disease.

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* See Hunter, Swediaur, Pearson, &c.

Post mortem examination in cases of dysentery exhibit increased vascular action of the peritoneum and intestinal canal. Can this indicate the use of mercury? We know that it is a powerful stimulant, and would be more likely to increase than allay the morbid action. I am well aware of the partiality for the use of the submur. hydr.; it is supposed that we are in possession of nothing else that will procure sufficient alvine evacuations, but scruple doses of calomel; no practice can be more egregiously wrong. It is an axiom in the treatment of enteritis, that the mildest laxatives should alone be used; this holds equally true in the dysentery of Western Pennsylvania. Let the inflammatory action first be reduced by the use of the lancet, warm fomentations, diaphoretics, blisters, anodyne and emollient enemas, with rest and abstinence, and the mildest aperients will be sufficient for evacuating the bowels. What benefit any judicious pathologist can expect from the use of mercury in phthisis pulmonalis, in such a climate as this, it must be difficult to conceive; a medicine that is avowedly a stimulant, increases the action of the heart and arteries, induces febrile excitement, rendering the system more irritable, and consequently leaving the emaciated frame less able to withstand atmospherical vicissitudes, which is one of the great exciting causes of the disease. In our fevers, it is equally uncalled for; and if pushed, the length of affecting the salivary glands, pernicious. Indeed, its beneficial effects in the fevers of tropical climates, where the liver is one of the principal seats of the disease, has been of much injury to us. Practitioners reasoning from the slight degree of analogy existing between our summer seasons and that of intertropical climates, have been led to suppose that hepatic derangement formed a characteristic feature of our fevers also. But this opinion only rests on false induction in the absence of post mortem exanation. With us, it is the brain, nervous system, stomach, and duodenum, which are the strong holds of the disease, the liver being healthy. It is a common practice among the people, and sanctioned by our practice, to have recourse to calomel, and that in large doses, in almost every simple obstruction of the bowels in the summer and autumn. This is a fertile source of evil in a climate so variable as this, and under which the most adamantine constitution must ultimately fall. In cases of persons confined to sedentary employments, a costive state of the bowels during the heat of summer and autumn is very prevalent, particularly among females; and the best practice is to obviate this tendency by keeping up a gentle and continued action of the intestinal canal with the mildest aperients, and a proper attention to regimen. The system is debilitated and rendered irritable by the increased atmospherical temperature to which it is exposed, and the sure way to render it still more irritable and debilitated is to enter on a course of scruple doses of the submuriatis hydrargyri. The great mass of empirical nostrums vended in the shops under the appellation of anti-bilious pills, &c. &c. are highly objectionable on this account, as they all owe their active qualities to the quantity of calomel they contain. Anti-bilious seems to be the watch-word under which those deleterious nostrums are daily foisted on society; the people imagine that most of their complaints arise from biliary derangement; hence a prescription that professes to be anti-bilious or an enemy to the bile, is a sovereign remedy for all their ills. While on this part of our subject, I would beg leave to allude to an article in the first number of this journal, by Dr. Jackson, containing some very just and well-merited strictures on the practice of physic as applied to England, so far as having recourse to powerful pharmaceutical agents, is concerned in slight cases of indisposition, and of that combination of the trade in drugs, with the duties of the physician. These observations apply with peculiar force to the practice of medicine as conducted in Western Pennsylvania.

I most heartily concur with this intelligent practitioner, that a complaint trivial in itself, may very readily be converted into one of more serious magnitude by this over-pharmaceutical practice, and by none more readily than the calomelizing plan. The patient, supplied with a dozen calomel pills, or half a dozen calomel powders, by his physician not being conscious of any thing very serious being connected with his case, pursues his usual avocations, and through inadvertency falls into some slight exposure, when the remedy becomes infinitely worse than the disease. It is true, the practitioner cautioned him perhaps to be aware of this, but why use a remedy fraught with such hazard in cases where it is not imperiously demanded, in a country where the generality of its diseases do not require it, and in a climate highly unfavourable to its use. In the case of delicate females, it is peculiarly destructive from their natural irritability of fibre, rendered still more so by their sedentary life, the habits and modes imposed by the structure of that society to which they must conform, with the cares and duties incident to their sex. All conspire to render them easy and almost certain victims to mercurial action. Only witness the effects of this mineral in the more robust, and judge of its ravages in the more tender. In our being full and lusty, the gait light and elastic, the muscular action firm, the countenance clear if not ruddy, the gums sound, the teeth unimpaired, and the mind strong. Only witness the contrast after having been calomelized for a season or two, in compliance with our biliary hypothesis.

The air languid, the muscular action paralized, the limbs feeble, the hand tremulous, the countenance sallow, the gums spongy, the teeth gone, the breath fetid, the appetite impaired, the organ of digestion injured, the constitution ten, or perhaps twenty years in advance of the natural age of the individual, the mind, that greatest ornament of feminine excellence, a wreck, with the entire frame like a living barometer, affected by every change of weather. Such is an outline of the evils entailed on society by our predilection for the use of mercury.

Art. VI. *On Paruria Erratica, or Uroplania.* By Salmon Augustus Arnold, M. D. of Providence, Rhode Island.

THE disease of erratic urine, though it has seldom been admitted into nosological arrangement, was accurately described as early as the sixteenth century. It is termed by most authors uroplania, from the Greek ουρον πλανητης erraticus. Dr. Good has given it a place in his nosology, (class eccritica,) under the title of paruria erratica. It sometimes exists at birth, from an imperforate meatus urinarius, but the common cause is ischuria, from disease or derangement in the urinary organs; hence it is more frequent in females than males. The stomach and skin are the most common outlets, and it is also frequently discharged from the ear, breast, and umbilicus, and from almost every part of the system, even from the eye.

The history of this disease is enriched with many important and interesting cases. I shall only refer to some of them as briefly as possible. My intention in examining this remarkable phenomenon of nature is to show that the erratic urine in its passage to the foreign outlets from which it issues, is conveyed through the medium of the general circulation.

The earliest case on record is related by Felix Platerus, of a female, who, being afflicted with a suppression of urine, a copious discharge came on from the right ear.